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ABSTRACT

A practicum was conducted to improve reading comprehension in classroom performance with the basal reading series and on norm-referenced tests. Subjects included a fifth-grade class of 28 students who were paired with another fifth-grade class as peer teachers. New skills were taught and practiced with the target population early in the week. On Thursdays, the lesson to be peer-taught was reviewed. The students were grouped on Fridays for the peer tutoring sessions. The Gates-MacGinitie Reading Test (comprehension section) was administered as a post-test. The criterion for success was a 3-month gain on the test by 75% of the students following the 12-week implementation program. A tally of the scores of the 15 students who finished the program revealed that only 60% met the objective; however, they did it with a 4.7 month gain. Results indicated that peer tutoring can increase the rate of completion of tasks, and that the strategies implemented are effective in raising reading comprehension scores. (Seventeen references are attached. Appendixes include: a table showing increases and decreases in stanines from grades three to four; population data; information on using context clues in science, social studies, and reading; fifth-grade guide and worksheet for the study of morphemes; text maps for invertebrates, clouds, and the War of 1812; directions for compare/contrast text structure; 1990 stanine analysis; grade and completion rate analysis; and tables showing percentage of peer teaching tasks completed and scores on the Gates-MacGinitie pretest and posttest.) (MG)

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Implementing Strategies in Content Area Reading for Increasig Reading Comprehension of Fifth Grade Students

by

June Clarke Cibula

A Practicum Report

Submitted to the Faculty of the Conter for the Advancement of Education at Nova University in partial fulfillment of the requirements for the degree of Master of Science.

July 1990

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Signed June Clarke Cebrela

Abstract

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The discrepancy between stanine scores, completion of Reading Mastery Tests, and classroom performance in the area of reading comprehension was addressed by the implementation of specific instruction in context clue strategies, text mapping, and compare/contrast text structure using peer tutoring and the content of social studies and science texts. The Gates-MacGinitie Reading Test, Form D, Level 2, was used as a pretest and posttest. Worksheets were created to facilitate the peer tutoring aspects of this project and are included in the Appendices. The results indicate that peer tutoring can increase the rate of completion of tasks, and that the strategies implemented are effective in raising reading complehension scores.

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Practicum Title Implementing Strategies in Content Area Reading for Increasing Reading Comprehension of Fifth Grade Students

Student's Name June Clarke Cibula

Program Site Jerry Thomas Elementary Date June12, 1990

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Observer's comment on impact of the project (handwritten):

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CHAPTER 1

Purpose

The target population for this study is a fifth grade reading class which is part of an elementary school comprised of 1501 students in a rapidly growing area. The composition of the school is 9 percent Black, 88 percent White, two percent Hispanic, and one percent Asain. Seventy-five percent of these children are transported to school either by bus or day care van. Ten percent arrive by car, and the remaining 15 percent either walk or ride their bicycles.

By fifth grade, only 34 percent of the children have attended this school for five years. In this mobile community, job transfer is the reason most cited for frequent moves. Seventy-nine percent of the children live with both parents. Eleven percent live with one parent. Eight percent live with a mother and step-parent, but only two percent live with a father and step-parent. One percent live with a legal guardian or relative.

The school is staffed by a principal, two assistant principals, two guidance counselors, a

psychologist, four teachers for specific learning disabilities, one alternative education unit, and 55 classroom teachers. There are three media specialists in the media center. Music instruction is provided by two music teachers, however, since the music room has been taken over by classes for learning disabilities, these two music teachers teach from music carts. Art classes take turns using the art room under the supervision of the three art teachers. The computer lab is available for each class once a week with instruction being provided by the classroom teacher. There are two speech teachers and three physical education teachers on the staff.

In this school all students are using the Macmillan reading series according to county requirements. The book assigned to the fifth grade is Echoes of Time which is one volume containing "levels 25-30." Student are presumed to have mastered a level when they demonstrate appropriate mastery of vocabulary and skills on the county provided Mastery Test. In addition to the basal reading series, the students also are provided with Science by Silver Burdett and Ginn, and The United

States, Its History and Neighbors, by Harcourt, Brace, and Janovich.

The State Student Assessment Test (SSAT) is given in the fall to students in grades three and five. The 1988 test results showed students in both grades at this school to be above the district and state level of achievement in the State Minimum Performance Standards. The Stanford Achievement Test (SAT) is given in the spring to students in grades three and five. Here again, the students in this school rank above both the district and national median composite percentile rank for 1989. Fifth grade, however, had the lowest composite score of all grade levels tested here. The Olsat is given to fourth grade in the spring. Both the Stanford Achievement Test and the Olsat yield stanines, and the stanines for fourth grade are also above the state and national norms (Appendix A: 35).

The total fifth grade population in this school is approximately 210 students. The target population is a homogenously grouped fifth grade reading class composed of 27 White students and one Black student. Eleven of these students are girls

and 17 are boys. Of the 28 students, four have already repeated at least one grade of school.

This particular reading class is the middle fifth grade reading class out of seven reading classes on this grade level. There are three fifth grade reading classes which are supposed to have more "advanced students," and three that are supposed to have "lower students." It was the responsibility of the fifth grade teachers to sort the 210 students into these particular reading classes taking into account their stanines and their level designation from their fourth grade classes.

All of the students in the target population were supposed to have entered fifth grade having completed Level 24 of the MacMillan Series. This means that they were supposed to be ready for the beginning of Level 25 when they entered fifth grade. Successful completion of Level 24 was to have been demonstrated by each student through the completion of the county Mastery Test for Level 24 with the degree of proficiency demanded by this county for each skill tested. This should have

placed the entire target population exactly on grade level.

The writer is currently a fifth grade teacher at this school and has two previous years of experience teaching third grade in the same school. Prior to this employment, the writer taught fourth grade and sixth grade in three other counties in this state. The writer has a B.S. degree in Elementary and Early Childhood Education from Florida State University. The duties of the writer at this school include teaching the target reading class as well as teaching English, spelling, writing, computers, science, health, and Me-ology to fifth graders. The writer also staffs the academic games component of the Friday enrichment program, and teaches an additional section of science and health to another class of fifth grade students.

One would expect that the middle section of homogeneously grouped students at this grade level would have stanines that are consistent with average performance, and that they would be able to cope adequately with the Level 25 material. That is not the case. The stanines of some of these

children indicate that it is not probable that they are up to grade level. In addition, in actual performance, many in this particular class are unable to cope successfully with the suggested comprehension questions for the stories at the very beginning of this level.

Test scores on nationally norm referenced tests verify that there is a discrepancy between actual classroom performance this year in fifth grade and what these students are supposed to be able to accomplish according to performance on the county Mastery Tests. For example, of these students who tested out of Level 24 at the end of fourth grade according to county requirements, two students have reading comprehension stanines of one; three students have reading comprehension stanines of two; two have stanines of three; four have fours; six have fives; three have sixes; six are sevens; and one has a nine. See Appendix A, page 35. These stanine scores are based on the Olsat which was administered during the spring of their fourth grade year.

Furthermore, comparison of the results of the stanines computed for the Olsat, given in fourth

grade, with the stanines computed for this population via the Sanford Achievement Test, given in the spring of the third grade, yield more significant data. Of the 28 students in this population, five students increased at least one stanine point, but 14 decreased at least one stanine point between third grade and fourth grade. Four students were unchanged, and there are no previous scores available for five of the students. Computation of the total change (for the 23 students with scores reported for both third and fourth grades) shows that there was a total gain of nine stanine points, but there was a total loss of 33 stanine points. In this school it is the fifth grade that reported the lowest total reading score on the SAT (Appendix B:36).

As to the actual classroom performance of these students, only seven out of 29 could pass the first comprehension activities of the workbook accompanying Level 25 with 80 percent or better. Three students did not do the assignment at all. On the second comprehension activity, again, only seven out of 29 passed with 80 percent or better, and six did not do the assignment. Vocabulary is a

problem for all but a few of these students as evidenced by their inability to use not only newly introduced words in sentences of their own, but also inability to use context clues to decode other words in the text.

The focus of this project, then, will be to seek improvement in reading comprehension in both the classroom performance on the comprehension pages of the basal series, and the reading comprehension scores of these students on norm-referenced tests.

Over a period of twelve weeks, 75 percent of the students in this target population will increase their reading comprehension skills as evidenced by a three-month grade level increase in score measured by the Gates-MacGinitie Reading Test, Level D, Form 2, Comprehension Section.

In addition, the comprehension skills of these students will improve as evidenced by a 25% increase in grades on the comprehension pages of the skill packs accompaning their basal reader.

Attitudes toward completed work will improve as evidenced by the percentage of total skill pack comprehension work pages completed and turned in.

The completion rate for the entire class should increase from 76% of students completing work to 90% of the students completing work.

Students will be able to recognize context clues and to describe the use of context clue strategies as evidenced by observation of their use of teacher made visuals and by completion of Appendixes D:49, E:52, F:55, G:58, and H:61. Further, their recognition of clues and use of strategies will be evidenced in the products (the above referenced Appendix forms completed by peers) of peer teaching situations involving a cooperating class of fifth graders.

Students will recognize topically and chronologically organized text as evidenced by: 1) use of Appencixes I:63, J:66, and K:68 as applied to four selections from their science and social studies texts, 2) instruction of peers in these strategies, and 3) the product of the instruction. Students will comprehend chronologically and topically organized text as evidenced by writing summaries using completed text map forms.

Students will be able to analyze compare/contrast text structure as evidenced by

their application of Appendix L:70 to four different passages in their science and social studies books. They will be able to synthesize compare/contrast text structure as evidenced by their application of completed Appendix L forms to the task of writing summaries of the four text selections. Students will be able to comprehend the selections as evidenced by their summaries and by the products of their peer teaching experiences on compare/contrast text with the cooperating class.

CHAPTER II

Research and Solution Strategy

By the time students have reached fifth grade it is important that they have finished learning to read and are now reading to learn. That they are succeeding in reading to learn is precisely the premise on which they are assigned hefty textbooks in the content areas. However, when comprehension scores fall, textbooks become less of an adjunct to learning, and it is time to take a look at what can be done to increase comprehension. While there are many components to comprehension, this author will limit the research that follows to: (1) increasing vocabulary, (2) mapping text, (3) using compare/contrast text structure, (4) and teaching by peers.

Direct instruction in vocabulary improves comprehension, and comprehension is directly related to how many words the student knows (Stahl, 1988). Early (1984) adds that comprehension depends upon prior knowledge and learning takes place only when learners are able to connect new ideas with what is already known. Therefore, it becomes imperative to teach elementary students how to use

prior knowledge to deduce the meanings of new words, and to increase the opportunities for success in this endeavor.

Stahl (1988) gives background on the acquisition of words of school children and agrees with Nagy and Anderson (1984) whose research shows that children acquire vocabularies of approximately 45,000 words during school years. These researchers conclude that it is only possible to teach 200 - 800 words per year. Citing Anderson, Wilson, and Fielding (1988) Stahl says that average fifth graders read about 1,200,000 words per year. Of those words, roughly 60,000 are unfamiliar. A five percent learning rate of these 60,000 unfamiliar words yields about 3,000 new words a year gained through context clues. As cited by Stahl, the estimate that Graves and Slatter (1987) make for what students actually do learn in a year is about 3000 words. Early (1984) says the "need in secondary school is to accelerate the natural rate of learning from context." It follows that if children can increase the percentage of words learned from context clues, then comprehensio will increase.

There are two numbers here to manipulate - the 1,200,000 words read, and the five percent of unfamiliar words learned by context clues.

Endeavoring to increase the five percent learned through context, Lunstrum (1980) identifies three kinds of context clues: (1) meaning bearing clues which draw on sense of the sentence and synonyms, (2) language bearing clues from structural and grammatical elements, and (3) organization clues related to the main idea. To develop a sense of meaning bearing clues, he suggests the cloze procedure. In remedial situations, repeated use of the cloze procedure will eventually lead to the student's needing fewer and fewer features of the surrounding text to decode the unfamiliar word, and that the word will eventually move into the student's sight vocabulary (Early 1984).

In using language bearing clues, Lunstrum (1980) gives examples of morphemic analysis Particularly with science and social studies vocabulary, he emphasizes studing the smallest units that can stand alone or be bound to prefixes, suffixes, and roots. Early (1984) suggests that

language bearing clues from word structure can be a problem for the learner. She gives examples in which "in" as a prefix means "not," but that only serves to confuse students in words such as "injection." Early recommends two general approaches to study of structure of words which are both related to forming words rather that taking them apart. "The first is to have students discover the way root words are changed to form different parts of speech." In the second, students are asked to web words such as "change" with varieties such as "interchange, changeable, and exchange." For more advanced students, using Latin roots such as "aster (star)" to produce "astronomical, astronaut, and disaster" is suggested.

In manipulation of the 1,200,000 words read a year, one can see that a direct realtionship exists between the number of words read per year and an increase in reading vocabulary (Stahl 1988). Erazmus (1987) found that the Pizza Hut "Book It" program, which encouraged students to increase their monthly exposure to print by reading a certain number of books a month, significantly increased the mean grade equivalents of fifth

graders. In his study the fifth graders were divided into high, middle, and low grading groups. All students had average IQ's. Even in the low group where the mean grade equivalent of the students was 3.321, there was an increase of almost 1.2 years at 4.564 by the end of fifth grade.

In a word of caution Early (1984) says, "If the text is too difficult, then readers won't get any help from context, and they will quit reading for meaning." Wilson (1983) affirms this.

> In fact, Forell and Hood (1981) found that many slower readers who were in third or fourth grade basals at the end of sixth grade did achieve grade level performance in reading on the Iowa Test of Basic skills by the time they were in eighth grade. Conservative placement in reading materials apparently allowed these students to develop comprehension skills in a way that would not have been possible had they been pushed into grade level books. This recommendation means that the lower groups will frequently need to spend more time at a particular level than one series can accommodate." p.386

In understanding what is going on when students struggle with text and comprehension, definitions of "cognition" and "metacognition" are necessary. Such are provided by Babbs and Moe (1983).

> Cognition refers to the intellectual functioning of the human mind and is

> characterized by focusing, attention, and processing information. Metacognition generally refers to one's knowledge of this cognition... Metacognition refers to the ability to monitor one's own cognition; it is thinking about thinking. When applied to the act of reading, this definiton suggests that the reader is able to select skills and strategies appropriate for the demands of the reading task. p.423

Enhancement of metacognition is afforded in instruction in those strategies related to the structure of text. Those strategies include networking and mapping, outlining using typographical clues, comparison/contrast, cause/effect, temporal sequence, problem/solution, description and enumeration (Armbruster 1986).

Many children lack sensitivity to the text structure - the way ideas in the text are organized (Armbruster 1986). The results of Armbruster's study suggest, however, that direct instruction in conventional text structure of expository text facilitates formation of macrostructure. This is important because macrosturcture steers students' encoding, recall, and reproduction of the essential points of the text. Therefore, the formation of macrostructures is necessary for students' successful global comprehension. Middle grade

children seem to have trouble forming macrostructure for expository text, perhaps because they have trouble identifying important information or finding the main idea.

There were two components to this instruction in her study: recognition of a text structure, and using a text structure to write summaries. The results of her study showed a recall of 50 percent more macrostructure by the students in the control group, as well as an increased ability to write organized summaries which included more of the main ideas.

Berkowitz (1986), in her experiment on the effects of instruction in text organization on sixth-grade students' reading of expository text, drew similar conclusions. In her control group, the students, after six weeks of instruction in text map construction, scored significantly higher than students who used other study procedures. Therefore, "It is recommended that instruction and practice in map-construction be provided periodically in middle-grade classrooms so that students become proficient at constructing maps and can add this technique to their repertoire of

effective study skills." It should be noted that Berkowitz distinguished between students' active construction of text maps, and students' passive study of text maps prepared by others, as the key to significantly greater recall.

Danielson (1985) refers to mapping of text as webbing and sees webbing as the initial step to instruction in outlining. In her study, she found webbing equally applicable to social studies text and fiction in a population of sixth graders. The ability to create an outline after instruction in webbing was significant both in terms of accuracy and the amount of time needed to complete the task. She suggests that different types of webs can also be used to clarify chronology, spatial relationships, emotional relationships, and predictions. Powell and Isaacson (1984) found much the same results, but they used science text with fifth graders.

In "A Summarizing Strategy to Improve Middle Grade Students' Reading and Writing Skills" teachers are encouraged to take the students a step further by not only teaching mapping and then outlining to them, but also to keep the students

actively involved in the regulation of their own metacognition by having them tell the important points of the story to a partner. The partners cooperate to construct the map, and then the outline together. After three tries with this method students were able to independently generate a skeleton outline of their own.

Compare/contrast text structure has been investigated by Raphael and Kirschner (1986) in a study of fifth and sixth graders using the assigned social studies text. With instruction using elaborate charts and diagrams produced by these authors specifically for each individual student, these students were taught to select the relevant information and impose an appropriate organizational pattern. They recognized three types of compare/contrast text structures; whole/whole, part/part, and mixed. These students improved in the free recall and also improved their ability to select and organize information it the writing test.

Richels, McGee, Lomax, and Sheard (1987) investigated the awareness of four kinds text structures, including compare/contrast, on the

effects on recall of expository text using 56 sixth grade students. They found that the students in their study had some awareness of text structure and predicted, based on the results of the study, that the students would benefit from instruction in how to apply a structure strategy. These four researchers found that of the four text structures investigated, the sixth graders had most awareness of compare/contrast text structure and least awareness of causation text structure. However, sixth graders consistently have difficulty with compare/contrast text structure were the findings of Raphael, Englert, and Kirschner (1986) as cited in this project by Richgels, et. al.

In putting these strategies into practice in the classroom, peer tutoring should be considered as a method. Peer tutoring experiments have shown that tutors benefit as much as their students. (Early 1984) "...indeed peer teaching is the basis of the study techniques we recommend for improving uses of reading in the content fields." An additional approach which takes the cooperation and effort of two teachers in different classrooms is recommended. The students should be paired with one

another so that one student is only a little more advanced than the other, and this ability match is more important than having the students be close in age.

The particular selection of strategies discussed and researched by this author in the preceeding pages reflect this author's concern about the lack global comprehension skills in the target population; furthermore, it reflects this author's observation that emphasis on some strategies necessary to global comprehension are missing from this basal reading series. An attempt has been made to select for implementation a few strategies that can be reasonably added to this classroom setting given the constraints imposed by scheduling and by the necessity of meeting other academic and enrichment requirements with these students.

This author concentrated on developing and implementing strategies designed for: (1) increasing vocabulary, (2) mapping text, (3) using compare/contrast text structure, (4) and teaching by peers. This class was paired with another higher level fifth grade class for the peer teaching

activities. The author would have preferred to pair with a fourth grade class or a lower fifth grade class, but scheduling would not permit.

CHAPTER III

Methodology

Implementation of this plan required that the author develop a classroom chart of context clue strategies, as well as diagrams and worksheets for the students. All student worksheets are included in this report.

The author also solicited the cooperation of another classroom fifth grade teacher. This teacher is referred to in this report as the "cooperating teacher", and the students from that class are the "cooperating students." This paired the target population, the middle reading class out of seven classes, as peer teachers to supposedly superior students from next to the highest reading group. New skills were taught and practiced with the target population early in the week. On Thursdays the lesson to be peer taught was reviewed. We grouped on Fridays with boys tutoring boys in one classroom under the supervision of this researcher while girls tutored girls in the other classroom under the supervision of the cooperating teacher. The following week, the students reversed

classrooms so that this researcher was observing the girls, and the cooperating teacher, the boys.

While the students of the target population were engaged in learning the strategies that follow, they also followed the Unified Curriculum. They proceeded through the basal reader taking the Mastery Tests provided by the county. During the week prior to the implementation, the students were given the Gates-MacGinitie Reading Test, Form D, Level 2, as a pretest.

Week One

The students of the target population studied "Pamala Purse" by Stan Silverstein as an introduction to the study of context clues. They also received a chart (Appendix C:47) which suggests several ways to use context clues. They analyzed selected passages containing unfamiliar words from the basal reader, the science text, and the social studies text. They recorded the method that they used to apply context clues to the unknown word (Appendices D:49, E:52, and F:55).

Week Two

The students in the target population studed the morphemic formation of words (Appendix G:58 and H:61) from their basal reader, social studies, and science text in order to expand their use of context clues.

They taught the skill of Week One and Two to students in another class. The student pairing was preassigned. Evaluation of the teaching experience followed. The students of both classes filled out questionnaires: "I wish my tutor/student would be..., My tutor did a good job of..., I wish..." Tutors found it difficult to work with one slow student and one fast student. Tutors wanted their students to listen better, but "students" wanted their tutors to give them more time to think, or to let them go ahead it they could go faster. Tutors discovered that sometimes they hadn't listened well enough to teach. Students resolved to make personal changes as necessary.

Week Three

The target population worked on text mapping in the second chapter of their science books. This chapter, dealing with invertebrates, had already been read in science class. From the information presented here, students filled in information on an already partially completed prepared map (Appendix I:63). The map included names of groups of animals listed in this chapter as well as examples of animals in the group. The researcher used the map to emphasize the relationship of the parts of the topic to the whole topic.

The students of the target population taught skills of Week Two to students in the cooperating class. Students of the cooperating class wanted a opportunities to do tutoring too. At this point this researcher and the cooperating teacher planned ways for students of the cooperating class to do such things as practice oral reading and other skills from the basal series with the target class.

Week Four

The target population received more instruction in constructing text maps that show

relationships of topics and developed a relational text map for pages 276-278 in their science book. They were given fewer clues than on the first map, but they were given directions for adding details (subordinate ideas). The subject matter of this selection, new to them, was clouds (Appendix J:66). In addition, they read about the circulatory system on pages 336-338 and drew a relational map of the paragraphs on blood as a group activity. They were given no clues. One group of students actually figured out an extraordinary map of clouds which showed the relationships in a valid, but unusual way.

They reinforced their skills by peer teaching the skills of Week Three to the students of the cooperating class.

Week Five

Students used the text map of the paragraphs on blood to organize and write all that they can remember of the information given on pages 336-337 of the science text.

They received instruction on using text maps showing sequence of events. Then, as a group activity they constructed a chronological text map

of the War of 1812 presented on pages 292-296 of the social studies text. Because this was a longer, more complicated passage, they were given instruction and clues (Appendix K:68).

Students of the target class taught the skills of Week Four to students of the cooperative class. They constructed a text map of pages 276-278 of the science text on the topic of clouds, and they constructed text maps of the circulatory system, pages 336-337 of the science book.

Week Six

Students of the target class used their maps of the War of 1812 to organize and write what they could remember of the information given on pages 292-296 of the social studies text into a summary. As a standard was needed to evaluate the summaries, this researcher guided the students in the development of an evaluation sheet. The evaluation form Appendis M:54) was revised several times.

Chronological text mapping using the War of 1812, pages 292-296 of the social studies text was taught to the students of the cooperating class.

Week Seven

The students of the target population received instruction on compare/contrast text structure. For this study they used the discussion of dry cell and wet cell batteries on page 170 of their science texts. They were taught that this is a whole/whole presentation. They analyzed the text as they completed Appendix L:70. Then they wrote a summary comparing wet and dry cell batteries using Appendix L as a guide.

Following their study, they instructed the members of the cooperating class in using their chronological text maps of the War of 1812 to write a summary.

Week Eight

The students of the target population repeated the exercise of Week Seven analyzing compare/contrast text structure onto Appendix L using the two paragraphs about Hamilton and Jefferson from pages 277 and 279 of the social studies text. They were taught that this is a Part/Part type of structure. They snythesized the information comparing and contrasting Hamilton and

Jefferson as they wrote a summary using completed analysis, Appendix L, as a guide.

Following their study, they tutored students of the cooperating class in the skills of Week Seven. They lead the cooperating class in writing a summary of the science text, page 170, of the lesson of Week Seven as they used Appendix L to analyze wet and dry cell batteries.

Week Nine

The students of the target population were taught to recognize a mixed text structure format. From a four-paragraph selection from page 341 in the social studies text, they wrote a summary of the conflict between the North and South. They again analyzed information using the chart, Appendix L.

The exercise of Week Eight was repeated as they tutored the students of the cooperating class in writing a summary of Hamilton and Jefferson.

Week Ten

The students of the target population were given the instructions that sometimes the selected

passage may not give enough details for a summary. They were encouraged to look up further details for themselves. Then they analyzed and synthesized the information given in the social studies book's discussion of the Merrimac and the Monitor as they wrote a summary according to the chart, Appendix L. Generalizations were difficult for them. For instance, they had trouble understanding that iron clad, and metal were both adjectives that could be classified under the type of construction of the ship. Then they wanted to label this as a contrast because they did not know the meaning of "iron clad."

Following this exercise they again tutored the students of the cooperating class in the lesson of the preceeding week.

Week Eleven

The target population had no new instruction. They instructed the cooperating class in the lesson of the preceeding week.

Week Twelve

The students of the target class reviewed what they learned during this study. This week was also

saved for taking care of the unexpected contingencies that arise in the scheduling of classes in the normal elementary school. The Gates-Mac Ginitie Reading Test, Level D, Form 2, Comprehension Section, was administered as a post-test.

CHAPTER IV

Results

The outcome of this plan was affected by a significant change in the target population just prior to the implementation of the plan. A drop-out prevention unit was added at this school. Due to the inclusion of students from various fifth grade classes in the drop-out unit, all of the fifth grade reading classes were restructured. Of the original twenty-nine students, fifteen students remained.

Of the original twenty-nine students, a student with previous reading stanines of four and two was tested by the school psychologist and found to be reading on a second grade level even though he had been passed through all of the fourth grade Mastery Tests. This author doubts the county Mastery Tests to be valid in measuring skills on grade level, and also doubts the Mastery Tests to be reliable indicators of reading level.

The evaluation of the effectiveness of the strategies chosen for implementaiton was done by this author. The Gates-MacGinitie Reading Tests Level D, Form 2, was administered as a pretest just

prior to Week One, and as a posttest in the week following Week Twelve. The criterion for success was a three-month gain on this test by 75 percent of students following the twelve-week implementation program. A tally of the scores of the fifteen students who finished the program reveals that only 60 percent of the students met the objective, however, they did it with a 4.7 month gain (Appendix P:79). If the scores of the two students who scored 11.5 and 12.5 on the pretest are discounted due to multiple regression, then 69 percent of these students showed a gain of 5.7 months which far exceeds expectation. In both cases, the number of months of gain exceeded the expectation of this project.

In addition, the comprehension of these students was evaluated in terms of their performance on the comprehension pages of the skill packs accompaning their basal reader. An increase of 25 percent in the cummulative grade average of two different September skill pack comprehension pages over the cummulative grade average of two consecutive May skill pack comprehension pages was to have been considered evidence of total class

increase in comprehension, but there was actually a 27 percent increase in average grade (Appendix N:75). Further, increase in comprehension related to skill pack pages occurred as evidenced by a score of 80 or better obtained by 75 percent of the class on May pages.

As a formative, affective evaluation of the peer teaching activity, the students of the target population and the cooperative class completed surveys after the first week of peer teaching. The students of both classes exchanged surveys, discussed the affective elements of peer teaching in a teacher lead discussion, and planned corrections as indicated. In the cooperating class the students wrote on their surveys that they wanted their peer teacher to give them time to think, but they also wanted their peer teacher to let them go ahead if they understood. The peer teachers wrote on their surveys that they wanted their students to listen better. Peer teachers discovered that it is harder to teach than to be a student because teachers have to know the material better. The peer teachers decided that they themselves needed to become better listeners in

order to be better prepared. Peer teachers were frustrated when they were assigned to teach one fast student and one slow student at the same time. Peer teachers were amazed that some of the students in the "higher" class seemed "slow" to them. This was an esteem enhancement activity for the target population. All students in both classes except one had positive feelings about the peer teaching situation. The students in the cooperating class wanted to experience teaching too, so some activities involving the basal reader were added to the program.

Ability to name context clue strategies and ability to use context clue strategies was deemed present in the target population by teacher observation of target students teaching these strategies to the cooperating students. Success in naming strategies and in using strategies was further evidenced through completion of Appendixes D:49, E:52, F:55, and H:61 by students in both classess.

Ability to recognize topically and chronologically organized text was evidenced in the target population through: 1) completion of

Appendixes I:63, J:66, and K:68 by both classes, 2) observation of the target students instructing peers in these strategies, and 3) the writing of summaries using completed text map forms by students of both classes. The total completion rate of all projects is found in Appendix O:77.

Students of the target class created and revised a criterion for evaluating the summaries. They graded the summaries of the cooperating students according to their criterion, and the students of the cooperating class graded summaries of the target population according to the criterion. The final grade for the summaries came from the reading teacher who in both cases found the students to be much more harsh in the grading than they themselves would be.

Ability to analyze and synthesize compare/contrast text structure was evidenced in the target population through: 1) completion of Appendixes I:63, J:66, K:68 by students of both classes, 2) the writing of summaries from these forms, 3) observation of the target students teaching these skills to the cooperating students in a peer teaching situation. The students

summaries in both classes exceeded the expectations of the teachers.

Although a numerical criterion for successful completion of the worksheets and summaries was not set out in the objectives, it is significant that the percentage of completed comprehension assignments was only 72 percent in September, 82 percent in May, but it was 92.5 percent for this project (Appendices N:75, O:77).

Likewise, improvement in stanines was not considered a criterion for success since scores from the SAT, Olsat, and CBTS are not equivalent. Nevertheless, this researcher notes that, between the third and fourth grades, the students of the original population lost .7 points cumulative average (Appendix A:43). However, the final population of students lost .37 points in cumulative average between third and fourth grades, but they lost only .13 points between fourth grade and fifth grade.

CHAPTER V

Recommendations

It is recommended by this author that these very successful kinesthetic/tactile strategies for teaching very abstract concepts be used in fifth grade reading classes where global structures are otherwise lacking in the basal reading series. Furthermore, it is recommended that science texts and social studies texts be used to augment the basal readers at this grade level. It is also recommended that peer teaching of chronological and topical text mapping and compare/contrast text structure be implemented in these reading classes.

During the coming year, this author and the cooperating teacher will again continue augmenting reading classes following the same format, with two exceptions: 1) the form for analysis of compare/contrast text structure will be rewritten to add greater emphasis to the generalization on which the comparison is made, and 2) a study of causation text structure will be added.

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Appendix A

Increases and Decreases in Stanines from Grades Three to Four

APPENDIX A

STUDENT NUMBER	STUDENT NAME	STANINE GRADE THREE	STANINE GRADE FOUR	INCREASE	DECREASE
1	JENIFER	5	6	1	
2	MIKE	-	7		
3	TWILLA	5	7	2	
4	JUSTIN	6	5		1
5	NATHAN	6	5		1
6	STEVEN	-	2		
7	TRAVIS	4	6	2	
8	CHRISTI	4	1		3
9	CHRIS	8	4		4
10	STEVEN	4	3		1
11	DANIEL	8	7		1
12	JAMIE	5	5		
13	BRENNA	4	2		2
14	LUCIE	5	2		3
15	ADAM	6	1		5
16	NATHAN	6	4		2
17	MARY	-	7		
18	CARISS	5	6	1	
19	DAWN	9	7		2
20	ERIK	5	3		1
21	CAITLY	6	5		1
22	JASON	-	5		
23	JARED	7	7		
24	CARRIE	6	9	3	
25	CHAD	4	4		
26	LORRAI	7	1		6
27	ANDY	7	7		
28	ZAC	-	5		
MEAN STANINE		6.2	5.5		
TOTAL INCREASE				9	
TOTAL DECREASE					33

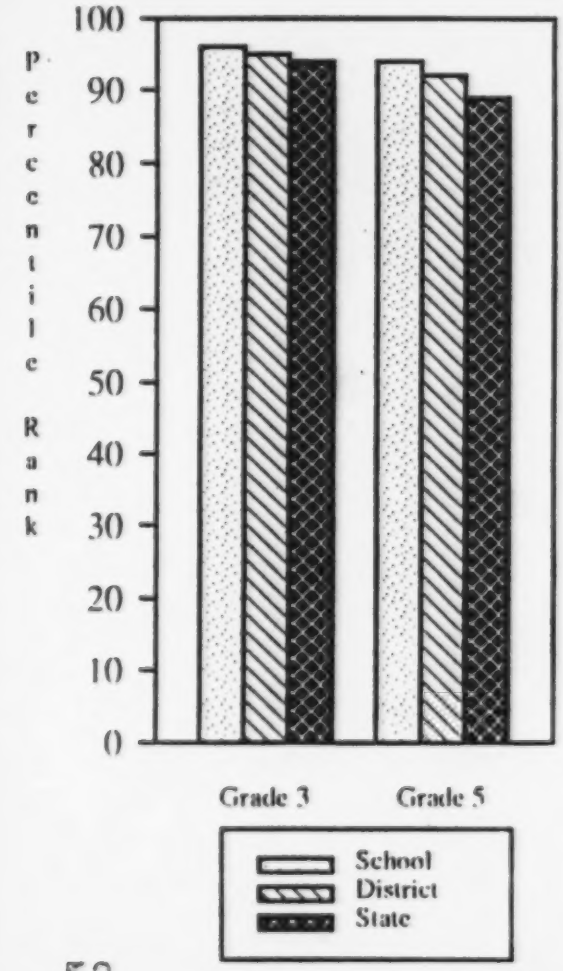
MEAN STANINE DECREASE FROM GRADE THREE TO GRADE FOUR = .7

Appendix B

1988-1989 Student Population Data

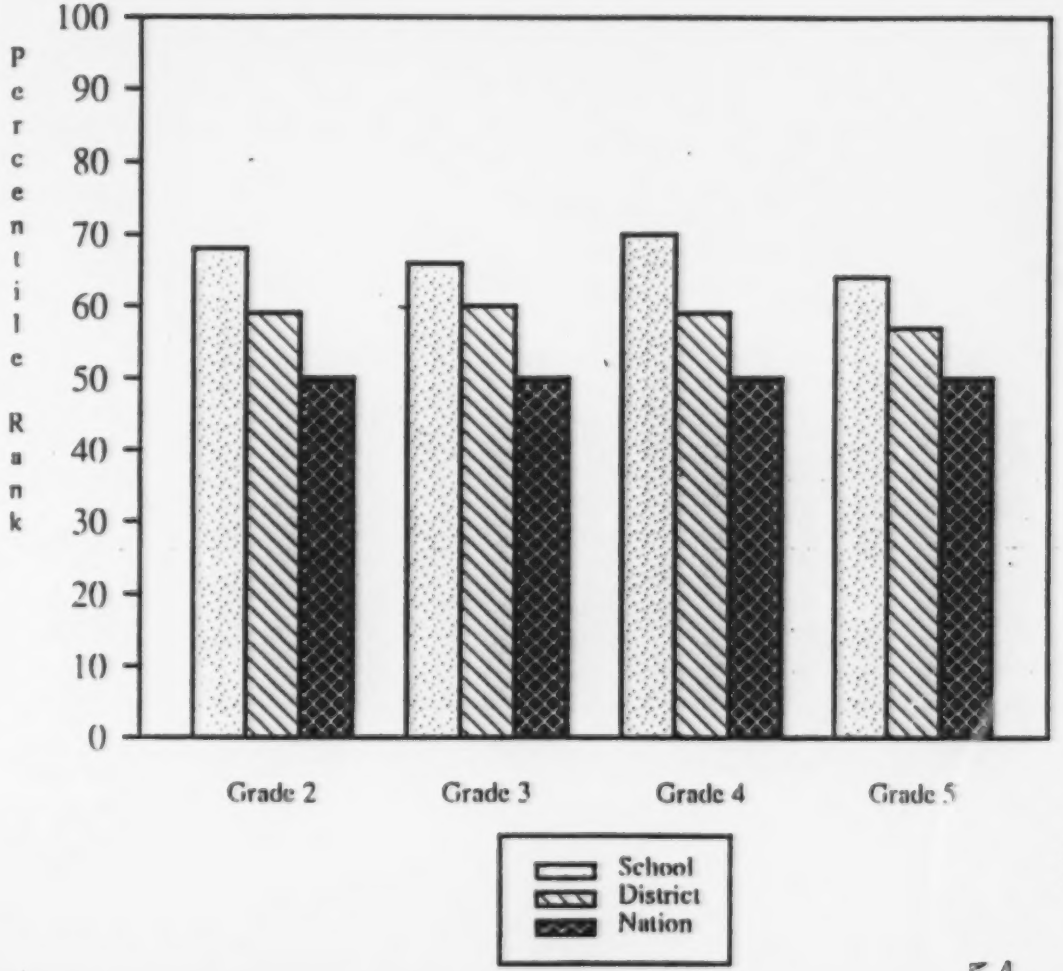
SSAT RESULTS

Each fall, students in grades 3 and 5 take the Florida State Student Assessment Test (SSAT), which measures achievement on the State Minimum Performance Standards. The table below shows school, district, and state composite scores, which reflect the average percent of students mastering the Standards.



SAT RESULTS

Each spring, students in grades 2-5 take the Stanford Achievement Test (SAT). The table below shows the school, district, and national median composite percentile rank scores on this test for 1989. The national score is useful for comparative purposes, since it always equals the fiftieth (50th) percentile rank.



Appendix C

How I Can Use Context Clues

APPENDIX C

How I Can Use Context Clues	
	1. Does the unknown word have an appositive? (Example: Fido, my dalmation, runs fast.)
	2. Is the unknown word opposite in meaning from another word? (Example: This one is small, but that one is humongous.)
	3. Is the meaning explained in the sentences before the unknown word?
	4. Is the meaning explained in the sentences after the unknown word?
	5. Does your experience in life give you any hints about the meaning?
	6. Do the pictures give you any clues to the meaning of the unknown word?
	7. Did you find another way to figure it out? If you did, what was your way?

Appendix D

Using Context Clues in Science

APPENDIX D

Using Context Clues in Science

DIRECTIONS

*Use your copy of Appendix C.

*For each unknown word, write down the number, or numbers from Appendix C of the methods that you used to find the meaning.

*Write the meaning of the unknown word in your own words.

1. Page 271. "front"

Methods_____

Meaning_____

_____

_____

2. Page 292. "nebula"

Methods_____

Meaning_____

_____

_____

3. Page 296. "disk"

Methods_____

Meaning_____

4. Page 320. "pivot"

Methods_____

Meaning_____

_____

5. Page 163. "open circuit"

Methods_____

Meaning_____

_____

_____

6. Page 163. "conductor"

Methods_____

Meaning_____

_____

_____

Appendix E

Using Context Clues in Social Studies

APPENDIX E

Using Context Clues in Social Studies

DIRECTIONS

*Use your copy of Appendix C.

*For each unknown word, write down the number, or numbers from Appendix C of the methods that you used to find the meaning.

*Write the meaning of the unknown word in your own words.

1. Page 307. "De Witt Clinton"

Methods_____

Meaning_____

_____

_____

2. Page 308. "Big Ditch"

Methods_____

Meaning_____

_____

_____

3. Page 395. "Bessemer process"

Methods_____

Meaning_____

_____

_____

4. Page 398. "invested"

Methods_____

Meaning_____

_____

_____

5. Page 399. "monopoly"

Methods_____

Meaning_____

_____

_____

6. Page 403. "AFL"

Methods_____

Meaning_____

_____

_____

Appendix F

Using Context Clues in Your Reader

APPENDIX F

Using Context Clues in Your Reader

DIRECTIONS

*Use your copy of Appendix C.

*For each unknown word, write down the number, or numbers from Appendix C of the methods that you used to find the meaning.

*Write the meaning of the unknown word in your own words.

1. Page 346. "plantation"

Methods_____

Meaning_____

_____

_____

2. Page 501-502. "prairie schooners"

Methods_____

Meaning_____

_____

_____

3. Page 508. "floundering"

Methods_____

Meaning_____

_____

_____

4. Page 561. "pageant"

Methods_____

Meaning_____

_____

_____

5. Page 563. "portfolio"

Methods_____

Meaning_____

_____

_____

Appendix G

Fifth Grade Guide to the Study of Morphemes

APPENDIX G

FIFTH GRADE GUIDE TO THE STUDY OF MORPHEMES

The star indicates the text in which the new word is found. S = science book. SS = social studies text, R = basal reader. A meaning of a morpheme is given only the first time it appears.

S	SS	R	NEW WORD	MORPHEME MEANING
*			arthropod	arthro = jointed
				pod = foot
			arthritis	itis = inflamation
			podiatrist	ist = a person
		*	optomitrist	
		*	physicist	
		*	naturalist	
*			biodegradable	bio = life
				de = lower, lessen
*			nonbiodegradable	able = useful for
				non = not
			biology	logy = study of
*			biomass	
*			bioconversion	
	*		astronaut	astro = star
	*		astronomy	
		*	astronomer	er = one who does
*			bronchitis	
			tonsilitis	

			century	centi = a hundred	
*			centipede		
	*		democracy	demo = people	
			democratic	cracy = rule	
*			echinoderm	echino = spiny	
			dermis	derm = skin	
			dermititis		
	*		economy	eco = environment	
*			ecosystem		
*			ecology		
*			geothermal	geo = earth	
			geology		
	*		geography	graph = write	
	*		graph		
		*	choreographer	chor = dance, sing	
			choreography		
		*	telegraph		
	*		monopoly	mono = one	
*			photosynthesis	photo = light	
			photography		
	*		piedmont	pied = foot	
				mont = mountains	
	*		sphere	sphere = ball	
		*	atmosphere	atmos = vapor	
	*		hemisphere	hemi = half	
			spherical		

Appendix H

Worksheet for the Study of Morphemes

APPENDIX H
WORKSHEET FOR THE STUDY OF MORPHEMES

DIRECTIONS
Find the underlined word in each sentence. Write a meaning, or tell something about that word. Use Appendix G to help.

1. A spider is an arthropod.

2. My grandmother suffers from arthritis.

3. Are plastic milk cartons biodegradable?

4. Wood is a biomass that is changed to energy in a campfire.

5. A centipede is an interesting creature.

6. A democracy is different from a monarchy.

7. The boy suffered from some kind of dermititis.

8. Ecology is important to all of us.

9. The man bought a book on geology.

10. Graphology is important to some people.

Appendix I

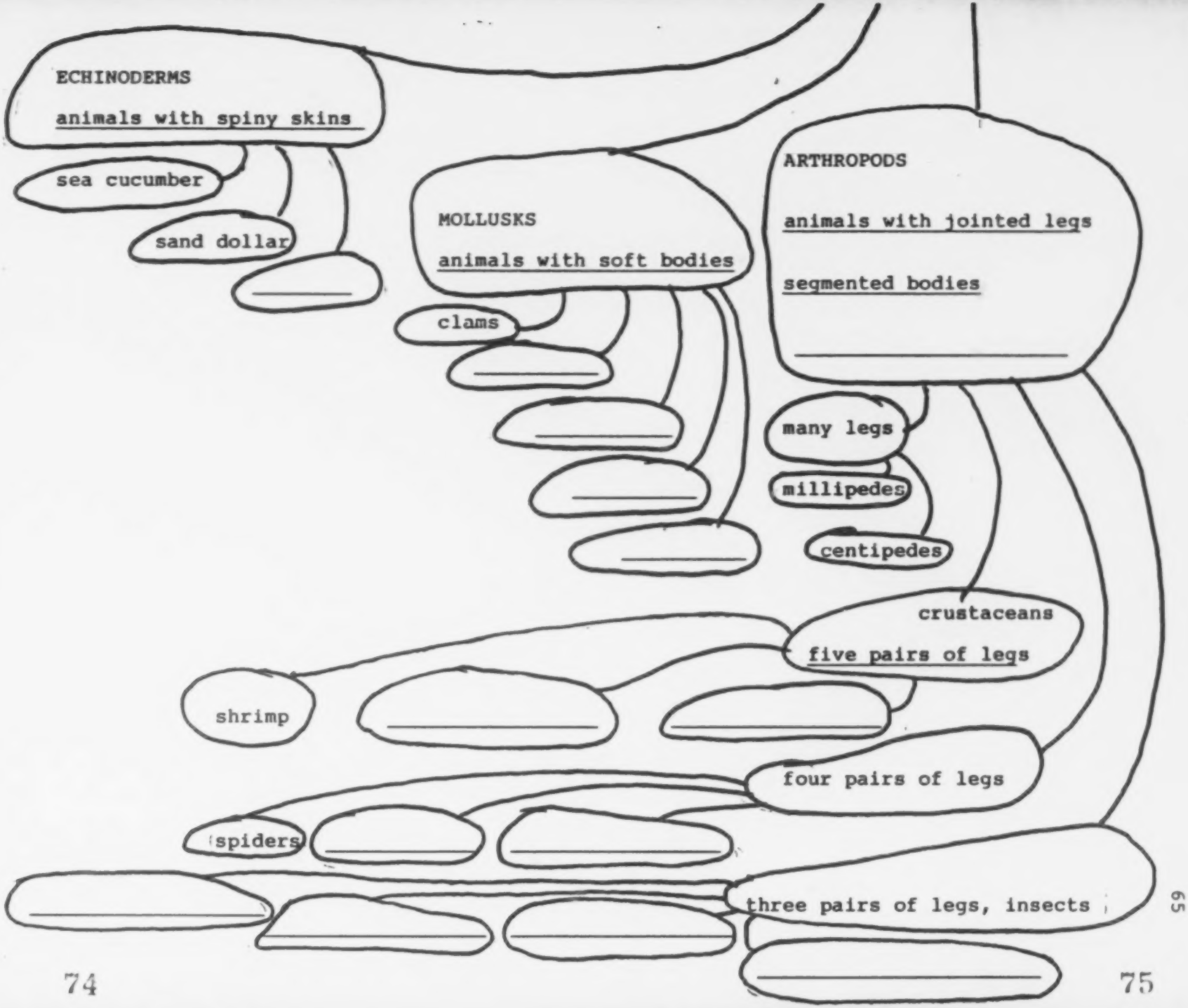
Text Map for Invertebrates

APPENDIX I

Text Map for Invertebrates

Directions

Open your science book to Chapter Two, page 28. Fill in this map.

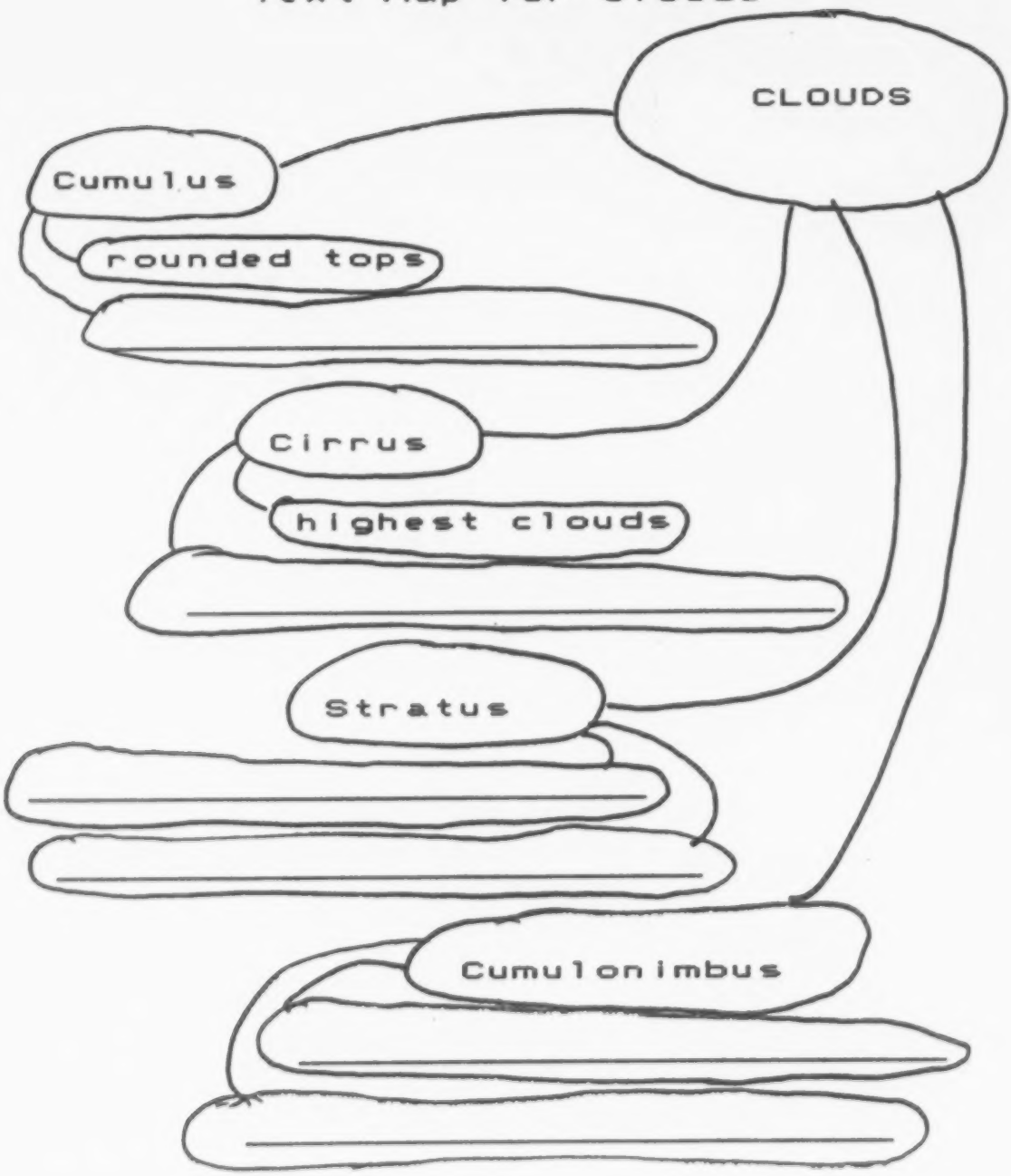

ECHINODERMS
animals with spiny skins
sea cucumber
sand dollar
MOLLUSKS
animals with soft bodies
clams
ARTHROPODS
animals with jointed legs
seqmented bodies
many legs
millipedes
centipedes
crustaceans
five pairs of legs
shrimp
four pairs of legs
spiders
three pairs of legs, insects

Appendix J

Text Map for "Clouds"

APPENDIX J

Text Map for Clouds

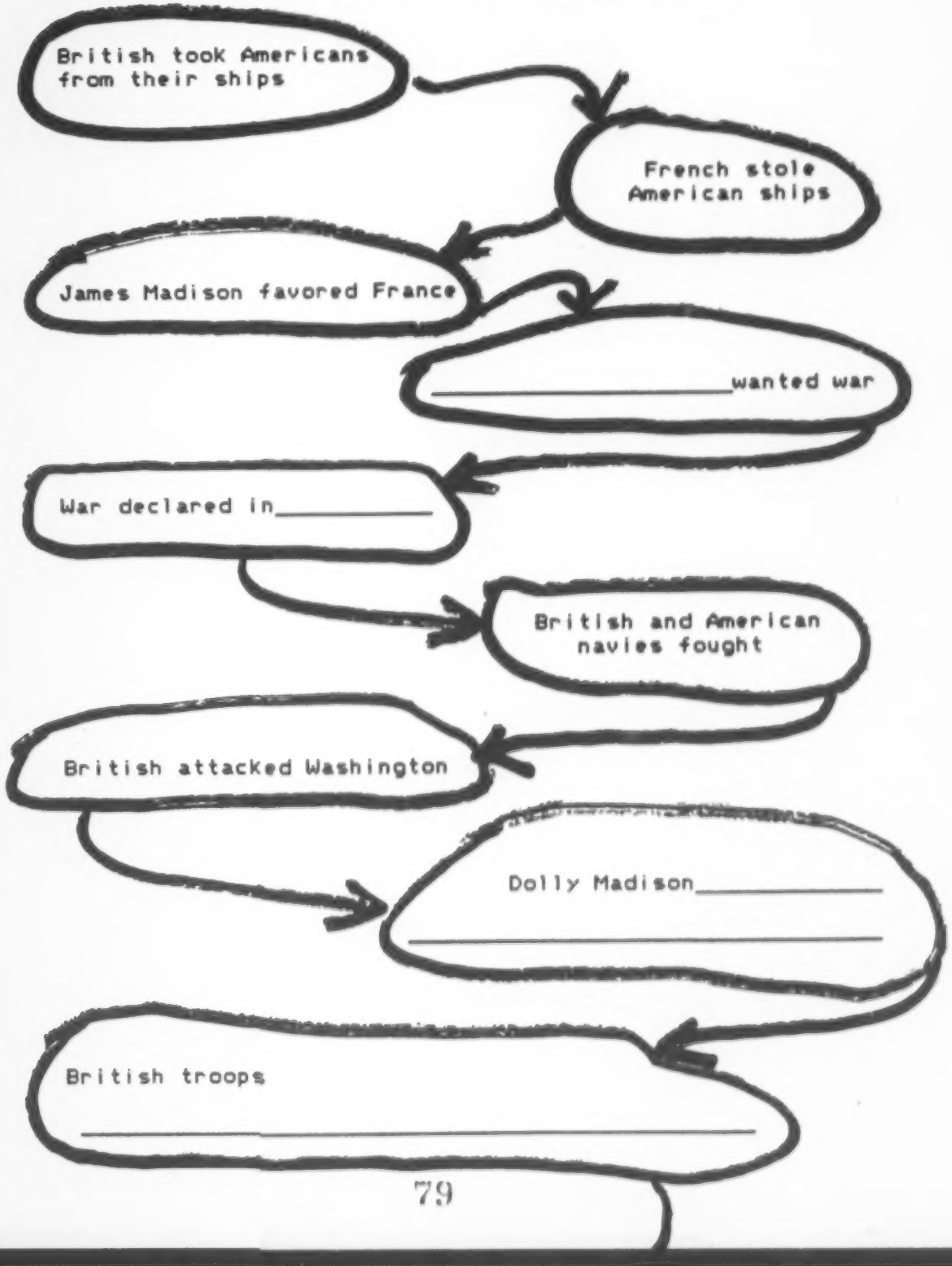


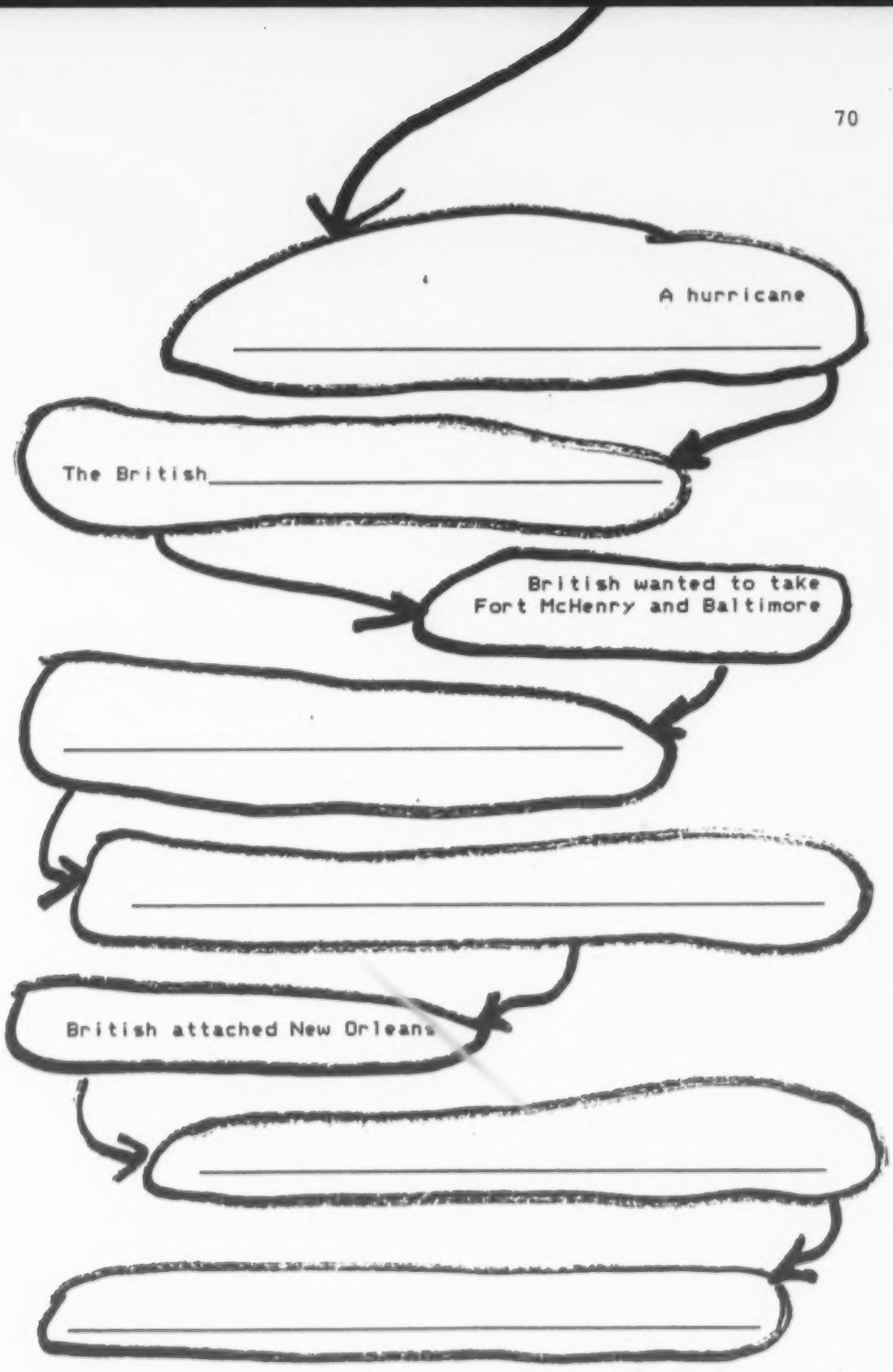
Appendix K

Text Map for "War of 1812"

APPENDIX K

Chronological Text Map for War of 1812




A hurricane
The British
British wanted to take
Fort McHenry and Baltimore
British attached New Orleans

Appendix L

Compare/Contrast Text Structure

APPENDIX L
Compare/Contrast Text Structure

Directions

*Read the text carefully.

*What is being compared? _____

_____

*Fill in the chart below.

*Tell how these two things are alike. _____

_____

*Tell how these two things are different. _____

_____

COMPARE/ CONTRAST	BETWEEN _____ AND _____	ALIKE OR DIFFERENT

Adapted from Raphael and Kirschner

Appendix M

1990 Stanine Analysis

1990 STANINE ANANYSIS

ID NO.		STANINE FROM 3RD TO 5TH 3	4	CHANGE	5	CHANGE
1	Jennifer	5	6	1	7	1
2	Mike	?	7		6	-1
3	Twilla	5	7	2	5	-2
4	Justin	6	5	-1	4	-1
5	Nathan	6	5	-1	4	-4
7	Travis	4	6	2	4	-2
9	Chris	8	4	-4	5	1
11	Dan	8	7	-1	9	2
12	Jaime	5	5	0	5	0
15	Adam	6	1	-5	5	4
17	Mary	?	7		4	-3
21	Caitlyn	6	5	-1	5	0
23	Jared	7	7	0	7	0
25	Chad	4	4	0	5	1
27	Andrew	7	7	0	6	-1
MEAN STANINE		5.9	5.53		5.4	
TOTAL POINT DECREASE				-8		-5
MEAN STANINE DECREASE				.37		.13

Appendix N

Grade and Completion Rate Analysis

Appendix N
Grade and Completion Rate Analysis
BASAL SERIES SKILL PACK COMPREHENSION SHEETS
TWO CONSEQUTIVES PAGES FROM SEPTEMBER
AND TWO CONSECUTIVE PAGES FROM MAY

		SEPTEMBER COMPREHENSION		MAY COMPREHENSION	
1	Jennifer	100	70	100	100
2	Mike	60	INC	100	100
3	Twilla	60	80	82	64
4	Justin	40	60	64	73
5	Nathan	INC	INC	100	96
7	Travis	80	80	91	70
9	Chris	80	90	64	87
11	Dan	40	INC	100	95
12	Jaime	40	INC	INC	INC
15	Adam	40	INC	INC	INC
17	Mary	60	INC	INC	INC
21	Caitlyn	100	40	100	100
23	Jared	60	NA	87	87
25	Chad	60	60	91	82
27	Andrew	0	20	82	73
	Average score	60		87	
	Completion rate	.7241379		.8275862	

Seven out of 21 students, 33%, rated 80 or better in September.

18 out of 24 students, 75%, rated 80 or better in May.

THIS SHOWS AN INCREASE IN CLASS AVERAGE OF 27 POINTS

Appendix O

Percentage of Peer Teaching Tasks Completed

Appendix O
PERCENT OF PEER TEACHING TASKS COMPLETED BY THE TARGET POPULATION

STUDENT ID NUMBER		PERCENT TASKS COMPLETED
1	Jennifer	100.00%
2	Mike	75.00%
3	Twilla	87.50%
4	Justin	100.00%
5	Nathan	100.00%
7	Travis	87.50%
9	Chris	100.00%
11	Dan	100.00%
12	Jaime	100.00%
15	Adam	100.00%
17	Mary	100.00%
21	Caitlyn	100.00%
23	Jared	62.50%
25	Chad	100.00%
27	Andrew	75.00%
Mean peer teaching tasks completed		92.50%

Appendix P

Scores on Gates-Macginitie Pretest and Posttest

Appendix P

GATES-MACGINITIE TEST, FORM D, LEVEL2, COMPREHENSION

STUDENT ID NUMBER		JANUARY PRETEST	APRIL POSTTEST	CHANGE
1	Jennifer	8.5	8.5	0
2	*Mike	5.8	8	2.2
3	Twilla	11.7	9.7	-2
4	*Justin	2.8	3.8	1
5	Nathan	6.7	6.4	-.3
7	*Travis	4.3	5.8	1.5
9	*Chris	6.4	6.7	.3
11	Dan	9.7	8.5	-1.2
12	*Jaime	6.4	7	.6
15	*Adam	4.1	6.4	2.3
17	*Mary	4.1	4.7	.6
21	*Caitlyn	6.7	7	.3
23	*Jared	8	11.7	3.7
25	Chad	6.1	5.6	-.5
27	Andrew	12.5	11.1	-1.4
MEAN GRADE EQUIVALENT		6.92	7.39	
NET AVERAGE GAIN				.47

* Indicates students meeting objective of 3 month gain

END

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